Toxicology Course Vienna

University course in

TOXICOLOGY

Science of Chemical Safety

for Postgraduates

Completion as Master of Science (Toxicology)

Next course: Summer term 2010 – Winter term 2012/13

NOW OPEN FOR REGISTRATION

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HISTORY:

The Toxicology Course Vienna was established in 1993 by the Department of Toxicology at the Institute of Cancer Research. Foundation of the course was supported by the Pharmaceutical industry, the Ministry of Health, and the Insurance for Occupational Risks. About 150 students have thus far attended the courses and many of them hold important positions in authorities or companies in Austria, the EU, and various countries.

OBJECTIVES:

Toxicology is the science of chemical safety. Aim and mission of toxicology is to identify potential harmful effects of chemical compounds to humans, animals and the environment, and to provide for their prevention and treatment. Appropriate experimentation and expert judgement allow to minimize the probability of the occurrence of adverse effects, which in the past have sometimes been of catastrophic dimension. Toxicology is a multidisciplinary science based upon Physiology, Biochemistry, Molecular Biology, Chemistry, Pharmacology, Pathology, Epidemiology and several others. Comprehensive education and training on an up-to-date level of toxicological science is mandatory. The Toxicology Course Vienna offers an education and training program in all relevant subjects.

Successful attendants are qualified

- to identify and to characterize adverse effects of chemical compounds,
- to elucidate mechanisms of action at the cellular, biochemical and molecular level,
- to review and to assess safety data generated for a specific chemical.
- to estimate the probability of the occurrence of adverse effects (risk assessment),
- to contribute responsibly to risk-benefit evaluation, risk management and risk communication,
- to develop approaches for prevention, diagnosis and treatment of adverse effects.

PARTICIPANTS:

- Professionals in authorities, companies or universities.
- Postgraduate (doctoral) students

Admission requirement: Graduation in Medicine, Veterinary Medicine or Natural Sciences such as Biology, Pharmacy, Chemistry, Biochemistry, Molecular Biology, Food Sciences, Agronomy, etc.

The course is organized as extra-occupational program.

- Participants can also attend single modules (see below) for continued professional development (CPD) if places are available.

STRUCTURE AND CONTENTS:

The course consists of practical and theoretical training and education. The overall duration is 3 years.

Theoretical knowledge is provided in 15 modules lasting 3 to 12 days (table). They consist of lectures, demonstrations, visits, and exercises (case discussions with role-playing). Each module is completed by a written examination.

Modules are offered sequentially, i.e. there is one module every 8 – 12 weeks.
All modules are held in Vienna.

MODULES

No	Title	Days
1.	Laboratory animal science, animal welfare	3
2.	Experimental design, biometry, statistics	3
3.	Cell and molecular biology in toxicology	4
4.	General toxicology. Organ toxicology. Laboratory diagnostics	12
5.	Toxicologic pathology	3
6.	Toxicologic epidemiology	3
7.	Analytical and forensic toxicology. Exposure assessment	4
8.	Toxicokinetics and metabolism	5
9.	Chemical mutagenesis	3
10.	Chemical carcinogenesis	5
11.	Reproduction toxicology	4
12.	Immunotoxicology, allergy	3
13.	Clinical toxicology	3
14.	Ecotoxicology	7
15.	Regulatory toxicology	4
Total		66

(approx. 560 lecture hours)

Covered in several modules are

Non-clinical safety
Nutritional toxicology
Occupational toxicology
In vitro Toxicology
Risk assessment and risk management

Practical training is acquired in institutions dedicated to toxicology or a related field. Full-time work for 3 years is to be performed under guidance by a recognized toxicologist. Success is documented by a *Master Thesis* which must consist of at least three publications or scientific reports in the area of toxicology.

REQUIREMENTS FOR COMPLETION

- Successful attendance of the 15 modules
- Documentation of practical training
- Approval of the Master Thesis
- Board examination in which the candidate has to prove her/his competence to address toxicological problems. Participants have to demonstrate comprehensive knowledge of one of the areas in toxicology, which shall be the area of the master thesis, and to demonstrate basic knowledge of all other curriculum modules.

CERTIFICATION:

Master of Science (Toxicology), Medical University of Vienna.

Accreditation as *EUROPEAN Registered Toxicologist, ERT*: After a total of 5 years of professional toxicological work the graduate can apply for registration in the European Register of Toxicologists by the Austrian Society of Toxicology (ASTOX) and the Federation of European Toxicologists & European Societies of Toxicology (EUROTOX).

FACULTY:

Leading experts from European universities, companies, and regulatory authorities.

LANGUAGE:

English

ECTS-CREDITS:

Practical toxicological work 120, master thesis 15, modules 45 credits.

LEGAL BASIS:

The legal basis of the University Course is the Curriculum
"Postgradualer Universitätslehrgang Toxikologie" of the Medical University Vienna, current version published in Mitteilungsblatt, MUW, 33. Stück, Study year 2006/07, July 18, 2007.
An English translation is available.

APPLICATION AND ADMISSION:

An application form and further details for application can be found at
http://www.meduniwien.ac.at/toxicology

There are about 30 places offered for participants

Applications are considered on the basis of qualification; if these are equal candidates are admitted in chronological order of application

Accession date: April 2010 or any time during the course if places are available.

FEES AND FUNDING:

Tuition Fee: Euro 1800 per semester.

The fee for each semester has to be paid in advance.

Interruption or conclusion of participation can be declared in writing at the end of each semester.

Fee reductions can be granted under certain provisions.
Inquiries should be directed to the course management.

COURSE MANAGEMENT:

The course is organized by the research unit "Chemical Safety and Cancer Prevention" at the Institute of Cancer Research, Department of Internal Medicine I.

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